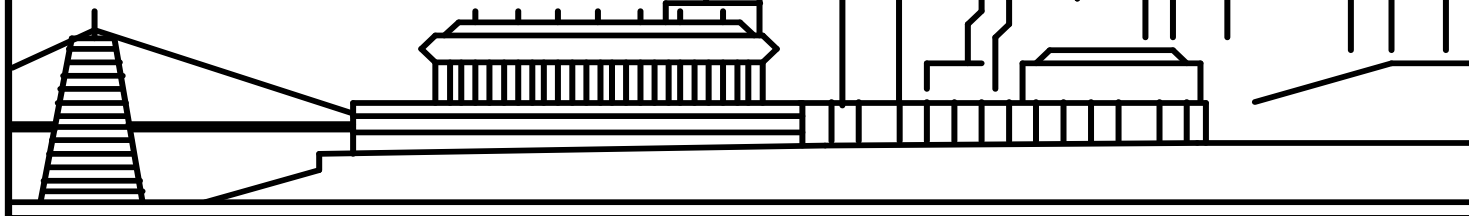




INSTITUTE OF
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ENGINEERS, INC.



MAY 1999

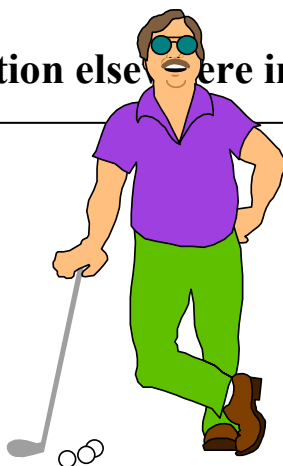
IEEE CINCINNATI SECTION NEWSLETTER

MAY/JUNE MEETING

IEEE CINCINNATI SECTION GOLF OUTING

FRIDAY, JUNE 4, 1999

(See information elsewhere in the newsletter)



CHAIR'S MESSAGE

by Ron Harbaugh, Section Chair

Joy to the advantages of computer technology. The day before my message is due for the newsletter, my employer's network server crashes and takes everything with it. Thanks to the help of the network techs we were able to recover most of the message to submit to Bob Morrison before the deadline. Poor Bob has to retype this because I am not able to send it email.

Here it is May already. Many IEEE members are preparing for the Golf outing on June 4. I can't make it (chained to my desk, you know). I know everyone will have a good time, as usual.

You see a lot of communication in the IEEE press about goals of the national organization. Setting goals is an important task for any organization these days. Your Section Executive Committee is interested in the one most important goal for the Cincinnati Section. That goal is to keep IEEE a viable organization in the Cincinnati area. Since this goal is difficult to measure, I have some suggested action items for us to work on to fulfill our goal.

1. Increase participation in the PACE program. To accomplish this, we will release member information to IEEE members working with the PACE programs so they may recruit helpers from the Section. The goal here is to increase the membership in PACE activity by 10% within the next 18 months.
2. Help create one technical society in the Cincinnati Section. I would like to see us form at least one technical chapter within the Section within the next 18 months. There should be enough members to form a chapter or two. There are no regular technical chapter activities now. Chapter activities are a good way for you to share technical information with other members working in the same technology. Also, this is a good way to network with individuals and companies in your area of expertise.

A technical chapter is formed by a petition with signatures of 12 or more members above student grade who are members of our IEEE society. Submit the petition to the Executive Board. The Section Chair and/or the Membership Chair can help locate members to contact for potential membership to a Chapter.
3. Develop more participation and interest in IEEE. Part of the action for this item is to locate additional members to serve on the Executive Board. I would like to seat two new members on the Board over the next 18 months. This is not a case of overloading the management of the Section. Potential retirement of some of the current Board members will require us to recruit replacements to carry on the business of the Cincinnati Section.

That's all I need to discuss right now. I have to consider our editor's situation. We are doing the summer recess now and, as the song goes, see you in September.

A MESSAGE FROM YOUR PACE CHAIRMAN

by Bill Lohner, PACE Chairman

"A Network of Professional Activities for Engineers"

This will be my last article as PACE Chairman of the Cincinnati Section IEEE. I have notified the Executive Committee that effective June 1, 1999 I am resigning from my position as PACE Chairman. Jim Everly, our current Section 2 representative on the IEEE Precollege Education Committee, will assume the position of PACE Chairman for the Cincinnati Section. Jim is an associate professor at OMI - College of Applied Science and has been very active at the section and national levels of IEEE-USA.

I want to thank members of the PACE Committee who worked with me, namely Jack Reed, Jim Everly, Mike Slupski and Bill Wachs. I also want to thank those of you who volunteered to give the "What Is An Engineer ?" presentation in their school districts. The IEEE would like to continue this program and if anyone desires to make a presentation, Jim Everly may be contacted at OMI-OCAS, phone # 556-4241. Special thanks to Jack Reed who has put together a "Retired Engineers Team" to help students in the Forest Hills School District. I also want to acknowledge those of you who have made educational software available to students on the Internet.

Hopefully some of the work done by the Committee over the last few years has been beneficial to the students in our area and will encourage them to continue technical and scientific studies.

Bill Lohner
PACE Chairman
(513) 385-7268

NEW MEMBERS

The following individuals are new IEEE members who are in our Section:

TERRENCE E. ALLGEYER
NINO G. BENVENUTI
MICHAEL H. BROWN
EVERETT A. BRUCE
WILLIAM L. BUSH
TODD R. CAUDELL
TRACY M. CHRISTOFERO

ALEX DOBOLI
SIMONA DOBOLI
BEN N. DOUGLASS
DOUGLAS S. GILLMAN
RICHARD M. KUNS
WILLIAM D. MCWHIRTER

JEFFREY MOSTER
MILIND NANAL
DAVID B. PETTIGREW
ANN E. KELLEY SOBEL
YU WANG
DONALD WINSLOW
MIKE YORK

The following individuals are existing IEEE members who have moved into the Cincinnati Section:

HAYAN A. CHIKHALI
GREGORY D. HARKNESS
JAMES P. HOLTEL
SANJIV M. KARANI
ROBERT H. TEDFORD

We wish to extend our welcome to all of our Section's new members!!!

Architects of the Net of Nets – Part 1

By Dick Reiman, Historian

Internet creators Bob Kahn and Vint Cerf took a fledgling experiment and grew it into an alternative to mass media. Vinton G. Cerf is dapper, convivial, pragmatic and from California. Robert E. Kahn is reserved, deep in piles of information and of concepts and is from New York City. They are unique in their common ability to sacrifice personal gain for project completion, and they emerged in 1970 from hundreds of enthusiastic contributors to be the prime movers in the development of the Internet.

Bob Kahn enrolled in a five-year engineering program, which included both Queens College and City College in Manhattan. He worked summers at Bell Laboratories at a time when color TV and digital communications were developing, but he chose telephone traffic engineering which was math intensive. In this work he gained a macroscopic view of the telephone system operations and for large-scale system design and simulation. He graduated from City College in 1960, and attended Princeton University in New Jersey on a National Science Foundation fellowship and chose as his Ph.D. thesis in electrical engineering two math problems, one using band width more efficiently and the other representing signals by sampling. The results were published in two different IEEE journals. After two years as an assistant professor at MIT teaching information theory, he joined the BBN Corp in Cambridge and became involved in computer networking development, and worked on the Pentagon's Advanced Research Projects Agency {ARPA}. Objectives were to develop "packet switching" network, and to decentralize so that no one military target would shut down the communications.

Circuit-switched telephone lines were not economical for bursts of data or "packets". Packets-switched networks break up messages into packets, stamp them with the message's address, and intersperse them with packets of other messages. On arriving at their destination, the packets are regrouped into the original messages. Kahn, with input from Severo Ornstein, authored BBN Technical Report # 1763 which included method of controlling errors, sequencing messages and managing the buffer space that held incoming, unassembled messages. In December 1968, BBN was chosen to build the world's first packet-switched network, and Kahn was persuaded to mastermind

the setup, with the first node {software, some hardware, and interfaces} designed built, and installed at the University of California just nine months later on September 1st, 1969.

Vinton G. Cerf was the son of personnel executive of Rockwell International Corp. They were testing rocket engines and he became hooked on science. At Stanford University, he took both math and computer science courses, and opted for the later. At IBM Corp. in Los Angeles, he found satisfaction as a programmer. As a graduate student at UCLA, which he attended to advance his schooling, Vin worked on the ARPA project and, significantly, UCLA was to be the first node of the ARPAnet with other participants being SRI International, Menlo Park, Calif., UC at Santa Barbara, and University of Utah, Salt Lake City. The sites were to be linked by BBN's subnet of customized minicomputers called Interface Messages Processors {Imps} connected by dedicated high-speed phone lines.

IEEE NEWS

IEEE TO AWARD \$10,000 SCHOLARSHIP AT INTEL SCIENCE FAIR

PISCATAWAY, NJ, April 8, 1999 - IEEE Educational Activities announced today that, at the 1999 Intel International Science and Engineering Fair (ISEF) to be held from 2-8 May in Philadelphia, a \$10,000 scholarship will be awarded to the high-school student whose project best shows "outstanding achievement in the research and presentation of engineering knowledge in electrical engineering and information technology or other IEEE fields of interest."

This "IEEE Presidents' Scholarship" will be the single largest award given by an association at this year's fair. The winner will receive \$2,500 per year for each of the four years of undergraduate study, provided "an IEEE field of interest" remains his or her declared major. In addition to the monetary award, the student will receive a plaque; a free IEEE Student Membership; and a CD-ROM and two videos that take an in-depth look at engineering careers.

Ken Laker, IEEE President, said, "One of the IEEE's strategic initiatives is to enhance science and engineering education for pre-college students. What better way to support this goal than to align with ISEF--the most prestigious academic event of its kind--and make an all-important investment in the future of the engineering profession."

Beginning in 1950, the International Science and Engineering Fair is the only worldwide competition for students in the ninth through twelfth grades. In 1997, Intel committed significant funds to become the title sponsor of this prestigious program. Considered by many in education to be the most enlightened program for science and engineering, INTEL ISEF provides for scholarships, internships, special awards, and travel grants totaling \$2 million to be awarded to deserving students each year.

The IEEE has committed to providing a scholarship package at the next four Intel Fairs - a total of over \$40,000. The 1999 scholarship will be funded through the IEEE President's budget, while the IEEE Foundation will fund the scholarships given at the 2000 through 2002 fairs. For more information, contact Christy Bouziotis, Educational Activities, at c.bouziotis@ieee.org, or by phone at 1.732.562.6526.

**PLENTY OF
PRIZES**

**MEET FELLOW
MEMBERS**

ENTERTAINMENT

CASH BAR!!

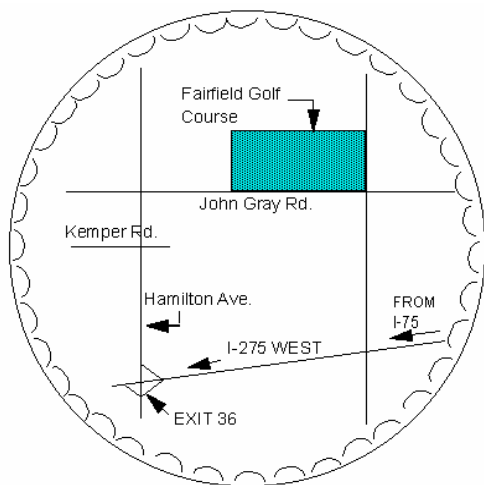
CINCINNATI IEEE SOCIAL EVENT

FRIDAY, JUNE 4, 1999

**AT THE FAIRFIELD GOLF COURSE
(FORMERLY PLEASANT RUN)**

**2200 JOHN GRAY ROAD
FAIRFIELD, OHIO**

- * **SIT DOWN DINNER-**
- NEW YORK STRIP STEAK OR**
- BAKED CHICKEN BREAST**
- * **REDSKIN PARSLEY POTATO,**
- BUTTERED CORN & TOSSED SALAD**
- * **COFFEE, TEA, MILK, FREE**
- * **FOUR CONCESSION TICKETS**
- * **THREE HOURS OF:**
- BEER & SOFT DRINKS & SNACKS**
- * **DINNER COST: \$20 (MEMBERS)**
- \$35 (NON-MEMBERS)**
- Golf Fees extra**
- (CHECKS PAYABLE TO IEEE, CINTI**
- SECTION)**
- * **IEEE STUDENT MEMBERS WHO PLAY**
- GOLF GET FREE DINNER TICKET**



GOLF COST IS EXTRA!!!

- * **MAKE GOLF RESERVATIONS WHEN YOU**
- MAKE DINNER RESERVATIONS**
- * **TEE TIMES ARE FIRST**
- COME FIRST SERVED**
- * **PROVIDE NAMES OF THOSE**
- IN YOUR GROUP- WE WILL**
- COMPLETE FOURSOMES**
- WHEN NECESSARY**
- * **GREENS FEES (INCLUDING**
- SHARED CART): \$38.50**
- * **ALL GOLFERS MUST USE**
- CARTS**
- * **INFORMAL DRESS**
- * **GOLF FEES PAID AT**
- COURSE**
- * **TEE OFF FROM 11AM TO**
- 1:30 PM**
- * **REFRESHMENTS AT 6 PM**
- * **DINNER AT 7 PM**
- * **ENTERTAINMENT/DOOR**
- PRIZES AT 8 PM**

**FOR GOLF/DINNER RESERVATIONS CALL BOB
WOOD AT (513) 287-2463 OR MAIL TO:**

**BOB WOOD
CINERGY
P.O. BOX 960, ROOM 625M
CINCINNATI, OHIO 45201**

bwood@cinergy.com

**YOU MUST GIVE YOUR NAME AND IEEE MEMBER
NUMBER WHEN MAKING RESERVATIONS**

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Orest Melnyk - Treasurer	397-5419, o.melnyk@ieee.org (E-mail)
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Jack Beckmeyer - Arrangements Chairman	353-3834
Bill Lohner - PACE Chairman	385-7268
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MAY 1999

IEEE CINCINNATI SECTION NEWSLETTER



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Electronics Engineers, Inc.
C/O Dee Scott
PO Box 53308
Cincinnati, Ohio 45253**

DATED MATERIAL
Please deliver promptly
If undeliverable, please discard